

**COMPRESSED AIR SYSTEM**



|                           |                |               |
|---------------------------|----------------|---------------|
| CERTIFICATE OF COMPLIANCE |                | NRCC-PRC-10-E |
| Compressed Air System     |                | (Page 1 of 3) |
| Project Name:             | Date Prepared: |               |

**A. General Information**

Phase of Construction:  New Construction  Addition/Alteration

Total System Horsepower: Proposed: \_\_\_\_\_ hp Current: \_\_\_\_\_ hp (if applicable)

- If in Addition/Alteration phase of construction and proposed total system horsepower is  $\leq 1.5$  multiplied by the current total system horsepower, system is exempt from Trim Compressor and Storage requirement (§120.6(e)1).
- If in Addition/Alteration phase of construction and system includes one or more centrifugal compressors, system is exempt from Title 24 requirements (§120.6(e)).
- If proposed total system horsepower is  $< 25$  hp, system is exempt from Title 24 requirements (§120.6(e)).

Is the system expected to have a steady load (typical air demand fluctuates less than 10 percent)?  Yes  No  
*(Note: If Yes, system must be approved by the Energy Commission Executive Director.)*

Is the system a single compressor system?  Yes  No  
*(Note: If Yes, system is exempt from Controls requirement (§120.6(e)2).)*

**B. Trim Compressor and Storage Requirements**

Fill out the following sections to ensure compliance with Trim Compressor and Storage requirement (§120.6(e)1).

**System Specifications Table**

| Total Online System Capacity (acfm): |           |                       |   | Operating Pressure (psi): |                          |                          |       |                            |
|--------------------------------------|-----------|-----------------------|---|---------------------------|--------------------------|--------------------------|-------|----------------------------|
| Compressor Specifications:           |           |                       |   |                           |                          |                          |       |                            |
| Compressor                           | Size (hp) | Rated Capacity (acfm) | Control Type (check one or fill-in for 'Other') |                           |                          |                          |       | Acting as Trim Compressor? |
|                                      |           |                       | Fixed Speed                                     | Variable Displacement     | Variable Speed           | Centrifugal              | Other |                            |
| 1                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 2                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 3                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 4                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 5                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 6                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 7                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 8                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 9                                    |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |
| 10                                   |           |                       | <input type="checkbox"/>                        | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |       | Y / N                      |

If number of compressors exceeds 10, please list the additional compressors with specifications in the following Notes section.

Notes:

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|  |
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|  |

**Largest Net Capacity Increment:**      acfm      *(Note: This calculation is detailed in the compliance manual Section 10.8, where the largest net capacity increment is the largest step in capacity between ordered combinations of base compressors.)*

**COMPRESSED AIR SYSTEM**CEC-NRCC-PRC-10-E (Revised MM/YY)

CALIFORNIA ENERGY COMMISSION



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| Do all of the trim compressors have the control type Variable Speed? |  | Results |
|--|--|---------|
| <input type="checkbox"/> Yes   | <b>If Yes, calculate the total rated capacity of the trim compressor(s) <u>7</u>.</b>  |         |
|  | <b>Total Rated Capacity of Trim Compressor(s):</b> acfm<br>Is the total rated capacity of the trim compressor(s) greater than or equal to 1.25 multiplied by the largest net capacity increment?   | Y / N   |
|  | <b>Storage Capacity:</b> gallons<br>Is the storage capacity greater than or equal to 1 gallons/acfm multiplied by the total rated capacity of the trim compressor(s)?  | Y / N   |
| <input type="checkbox"/> No  | <b>If No, calculate the effective trim capacity of the trim compressor(s).</b>   |         |
|  | <b>Effective Trim Capacity:</b> acfm<br>Is the total effective trim capacity greater than or equal to the largest net capacity increment?<br><br><i>(Note: This calculation is detailed in the compliance manual, <u>Section 10.8</u>)</i> | Y / N   |
|  | <b>Storage Capacity:</b> gallons<br>Is the storage capacity greater than or equal to 2 gallons/acfm multiplied by the total rated capacity of the trim compressor(s)?  | Y / N   |

| C. Controls Requirement  |            |                          |
|--|------------|--------------------------|
| <i>Multicompressor systems must perform and document the acceptance test noted below to prove compliance with the Controls requirement (§120.6(e)2). -This test is described in the Nonresidential Appendices, NA7.13.</i> |            |                          |
| Equipment Requiring Testing or Verification  | # of units | NRCA-PRC-01-A            |
|  |            | <input type="checkbox"/> |
|  |            | <input type="checkbox"/> |
|  |            | <input type="checkbox"/> |



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|  |   |
|--|---|
| <b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b>  |   |
| 1. I certify that this Certificate of Compliance documentation is accurate and complete.   |   |
| Documentation Author Name:   | Documentation Author Signature:                         |
| Company:   | Signature Date:   |
| Address:   | CEA/ HERS Certification Identification (if applicable): |
| City/State/Zip:  | Phone:  |
| <b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b>  |   |
| I certify the following under penalty of perjury, under the laws of the State of California:   |   |
| <ol style="list-style-type: none"> <li>The information provided on this Certificate of Compliance is true and correct.</li> <li>I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).</li> <li>The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.</li> <li>The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.</li> <li>I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.</li> </ol> |   |
| Responsible Designer Name:   | Responsible Designer Signature:                         |
| Company :  | Date Signed:  |
| Address:   | License:  |
| City/State/Zip:  | Phone:  |

### **NRCC-PRC-10-E User Instructions**

This is the primary form for compressed air systems, which provides compliance information for the use of the enforcement agency's field inspectors. This form must be included on the plans. A copy of this form should also be submitted to the enforcement agency along with the rest of the compliance submittal at the time of building permit application.

#### **Project Description**

PROJECT NAME is the title of the project, as shown on the plans and known to the enforcement agency.

DATE is the last revision date of the plans. If the plans are revised after this date, it may be necessary to re-submit the compliance documentation to reflect the altered design. Note that it is the enforcement agency's discretion whether to require new compliance documentation or not.

#### **Section A. General Information**

PHASE OF CONSTRUCTION indicates the status of the building project described in the compliance documents. Refer to the Nonresidential Compliance Manual Section 1.7 for detailed discussion of the various choices.

1. NEW CONSTRUCTION should be checked for all new buildings, newly conditioned space or for new construction in existing buildings (tenant improvements, see Section 1.7.11 and 1.7.12) that are submitted for envelope compliance.
2. ADDITION should be checked for an addition which is not treated as a stand-alone building, but which uses option 2 described in Section 1.7.14. Tenant improvements that increase conditioned floor area and volume are additions.
3. ALTERATION should be checked for alterations to an existing building mechanical systems (see Section 1.7.13). Tenant improvements are usually alterations.

STEADY LOAD – indicate if the compressed air system is to have a steady load. If yes, the system must be approved by the Executive Director.

SINGLE COMPRESSOR – indicate if the compressed air system contains a single or multiple compressors. If yes, then the system is exempt from the controls requirement.

#### **Section B. Trim Compressor and Storage Requirements.**

TOTAL ONLINE SYSTEM CAPACITY – enter the total online system capacity in actual cubic feet per minute (acfm). The online capacity is determined by all the compressors that are available to serve peak load. Online compressors do not include back up compressors whose purpose is to be available when a compressor fails.

OPERATING PRESSURE- enter the designed operating pressure in pounds per square inch (psi)

SIZE – enter the size of the compressor in nominal horse power (hp) according to the manufacturer's specifications.

RATED CAPACITY – enter the rated capacity according to the manufacturer's specifications in acfm.

CONTROL TYPE – indicate the control type used for the compressor.

ACTING AS TRIM COMPRESSOR – specify if the compressor is acting as the trim compressor for the compressed air system.

LARGEST NET CAPACITY INCREMENT – this value is calculated and expressed in terms of acfm. For the detailed calculation see the Nonresidential Compliance Manual Section 10.8.

#### **Section C. Controls Requirement**

The Designer is required to list all system and identify the applicable acceptance testing required. Those who are allowed to conduct the tests are the installing contractor, design professional or an agent selected by the owner.

**Documentation Author's Declaration Statement**

The CERTIFICATE OF COMPLIANCE is signed by both the Documentation Author and the Principal Designer who is responsible for preparation of the plans of building. This latter person is also responsible for the energy compliance documentation, even if the actual work is delegated to a different person acting as Documentation Author. It is necessary that the compliance documentation be consistent with the plans.

DOCUMENTATION AUTHOR is the person who prepared the energy compliance documentation and who signs the Declaration Statement. The person's telephone number is given to facilitate response to any questions that arise. A Documentation Author may have additional certifications such as an Certified Energy Analyst or a Home Energy Rating System certification number. Enter number in the CEA# or HERS# box.

**Declaration Statement of Principle Designer**

The Declaration Statement is signed by the person responsible for preparation of the plans for the building and the documentation author. This principal designer is also responsible for the energy compliance documentation, even if the actual work is delegated to someone else (the Documentation Author as described above). It is necessary that the compliance documentation be consistent with the plans. The Business and Professions Code governs who is qualified to prepare plans and therefore to sign this statement. See Section 2.2.2 Permit Application for applicable text from the Business and Professions Code.